F00458

NOAA FORM 76-35A

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE

DESCRIPTIVE REPORT

Type of Survey_	Hydrographic/Side Scan Sonar
Field No	AHP-10-5-00
Registry No	F00458
	LOCALITY
State	Florida
General Localit	y North Atlantic Ocean
Locality A	pproaches to Port Canaveral
	2000
	CHIEF OF PARTY Brian A. Link

LIBRARY & ARCHIVES

APR 7 2000

NOAA FORM 77-28 U.S. DEPARTMENT OF COM (10/72) NATIONAL OCEANIC AND ATMOSPHERIC ADMINIST	MERCE RE	EGISTER NO.
HYDROGRAPHIC TITLE SHEET		F 00458 - S H901-NRT1 -
INSTRUCTIONS - The Hydrographic Sheet should be accompanied by this filled in as completely as possible, when the sheet is forwarded to the O	orm.	AHP-10-5-00
State Florida		
General locality Port Canaveral North ATLANTIC Ocea	N	
Locality Approaches to Port Canaveral		•
Scale 1:10,000 Date o	survey 1/	JAN - Feb. 27, 2/8, 2/9, 2000
Instructions dated Project	No. S-H9	01-NRT1
Vessel 1211		
Chief of party Brian A. Link		
Surveyed by Navigation Response Team 1		
Soundings taken by echo sounder, hand lead, pole		
Graphic record scaled by MJM, JBG, GDH, BAL		
Graphic record checked by MJM, JBG, GDH, BAL		
Protracted by HPS He was Au	I T PACE tomated plot	KAND DesigN Jet 2500CP Coffice toy HPS (Field)
Verification by AHB ATLANTIC Hydrographic Brane		_
Soundings in fathoms feet at MLW MLLW		

REMARKS: * HAND WITTEN NOTES IN DESCRIPTIVE REPORT

were made during Office processing.

ALUOIS/SURE 4/6/00 MCR

DESCRIPTIVE REPORT TO ACCOMPANY HYDROGRAPHIC SURVEY F00458

SCALE: 1:10,000 2000 NAVIGATION RESPONSE TEAM 1

A. PROJECT

This survey was conducted prior to receipt of official Project Instructions. However, request for tidal requirements were made prior to beginning to survey. The project name is S-H901-NRT1, Florida, Port Canaveral, Approaches to Port Canaveral.

This project was conducted in response to requests from the Port Canaveral Pilots Association to remove these charted features prior to publication of the new chart. Modern hydrographic surveys are required in the project area to ensure safe navigation of commercial shipping.

B. AREA SURVEYED

The area surveyed for F00458 covers three areas of concern to the Pilots: a 30 foot sounding over a charted wreck located at Lat. 28°23'51.4", Lon. 80°32'01.5" (AWOIS 235), an obstruction charted at Lat. 28°24'55.0", Lon. 80°32'53.2" (AWOIS 10485), and a discontinued disposal area in the vicinity of Lat. 28°23'20", Lon. 80°33'40". The limits are:

North - 28°25'06"N South - 28°22'00"N East - 080°32'00"W West - 080°35'00"W

This survey was conducted on January 27 (DN 027), February 8 (DN 039), and February 9 (DN040), 2000.

C. SURVEY VESSELS

NOAA launch 1211, a 28-foot SeaArk, was the vessel used to collect all survey data. There were no unusual vessel configurations nor problems encountered.

D. AUTOMATED DATA ACQUISITION AND PROCESSING See Also Evaluation Report.

Coastal Oceanographic's HYPACK software package, version 6.4 was used to collect all hydrographic data for this survey. HPS version 4.03 was used for data processing.

Other computer programs used were:

MapInfo

Ver. 5.0

VELOCITY

Ver. 4.0

Microsoft Word 97

E. SIDE SCAN SONAR EQUIPMENT

Side scan sonar (SSS) operations were conducted using an EG&G model 260 slant-range corrected SSS recorder and an EG&G 272-T dual-channel, single frequency towfish. The towfish was operated on the 100-kHz frequency and was configured with a 20° beam depression. The side scan sonar equipment used for the survey was towfish serial number 016835 and recorder serial number 016942.

Side scan sonar data was collected utilizing the 50-meter range scale. In order to acquire the required 200% coverage, main-scheme lines were run at 40 meter spacing. Adequate coverage was determined by producing two separate swath plots and ensuring 100% coverage on each plot.

The side scan sonar towfish was maintained at a height off the bottom of 8 to 20 percent of the range scale used. Confidence checks were performed on a routine basis, primarily by noting changes in bottom texture on the outer edges of the sonargram, and on buoys and other contacts in the survey area.

Only one significant contact was found, at the position for item no. 235. The contact was investigated using echo sounder development.

F. SOUNDING EQUIPMENT

An Innerspace model 448 depth sounder, serial number 186, was used to collect all soundings.

G. CORRECTIONS TO SOUNDINGS

Soundings were recorded using the Innerspace model 448 depth sounder. It was adjusted for an assumed speed of sound through water of 1500 meters/second. Changes to the gain and/or chart speed were noted on the echogram. Digitized soundings agreed with the analog trace within 0.1 meter.

Corrections for the speed of sound through water were computed from data obtained with Sea-Bird Electronics Inc. SEACAT electronic profiler, serial number 192276-287. Data quality assurance tests were performed in accordance with Field Procedures Manual (FPM) 2.1.3.2. Program VELOCITY was used to compute speed of sound through water corrections. Copies of the velocity tables and cast data are in the "Survey Separates."

Correctors for the velocity of sound through water were determined from the casts listed below:

Velocity <u>Table No.</u>	Cast <u>No.</u>	Deepest Depth (m)	Applicable DN	Cast <u>Position</u>	<u>Day</u>
1 027	6	10.8/14.0*	027	28°24'00"N	
				080°36'00"W	
2 039	2 .	11.5/15.5*	039-040	28°24'00"N	
				080°36'00"W	

^{*} software extrapolated depth

Correctors were applied to the sounding data prior to plotting.

A static draft of 0.5 meter was applied to the on-line data. The draft was measured prior to launching the boat by measuring up from a level placed on the transducer to the bottom of the rub-rail. After launching the boat, a measurement was made from the rail down to the water surface. Settlement and squat measurements were performed on March 23, 1999 (DN 082), at Tampa, FL, using Lietz level S/N 08754. Settlement and squat correctors and the static draft corrector were applied on-line through the offset table. Copies of the field data, the graphs of the settlement and squat correctors vs. speed in meters/second, and the offset table are included in the "Survey Separates." **

The Trident Pier, FL tide station (872-1604) served as control for datum determination. Unverified actual water level heights from this gauge were downloaded from the NOAA web site and used for correcting the soundings for this survey. This station is also the reference station for the predicted tides. Tides were direct off the gage, with no zoning required.

Approved tides were requested from the Ocean and Lake Levels Branch, N/OES231, in a letter dated February 25, 2000. A copy of the letter is appended to this report. Approved Ticles and Zames were applied during office processing,

* DATA Filed with Field Records.

H. CONTROL STATIONS See Also ENHUATION Report.

The horizontal control datum for this project is the North American Datum of 1983. The USCG Differential GPS (DGPS) Beacon at Cape Canaveral, FL was used to control this survey. The position for the reference station antenna is 28° 27′ 36″N, 080° 32′ 36″W.

I. HYDROGRAPHIC POSITION CONTROL

DGPS was used as the method of positioning for all hydrographic data on this survey. The USCG Differential GPS beacon at Cape Canaveral, FL was used as the reference station in conjunction with beacon receiver serial number X-1086 and antenna serial number MBA-M1039 on launch 0517. A Starlink sensor, serial number 700417A1065 was used as the remote station on vessel 1211. This equipment met the accuracy standards for this 1:10,000 scale survey.

J. SHORELINE See Also Evaluation Report.

Shoreline shown on the final sounding plot was from the raster image of chart 14484, 19th edition, March 5, 1994. The MapInfo program was used for plotting. There were no shoreline changes noted from the chart.

K. CROSSLINES

Crosslines were not run.

L. JUNCTIONS

This survey does not junction with any contemporary surveys.

M. COMPARISON WITH PRIOR SURVEYS See HISO ENHIUATION Report.

Comparisons with prior surveys will be performed by AHB.

No dangers to navigation were identified during the course of this survey.

N. ITEM INVESTIGATION REPORTS

RECRD	235	VESSLTERMS	MOHICAN		CHART	11476	AREA	Ħ
		CARTOCODE	0100		SNDINGCODE		DEPTH	0
LAT83 LATDEC:	28 23 5		LONG83 LONDEC:		3337722222	NATI VDATUM GPQUALITY	1 6	
PROJECT RADI US TECNI Q Techniqnote	S2,ES, CONF INVES 30 FT	FLICT BETWEEN STIGATION WITH	IIN RECTANGL	EPTH GP E SHOW	Assigned MCR AND LEAST DEPTI N ON MAPINFO GR DUNDED BY LAT.28	H GP EXIST. CO	IFY OR DISPRO	VE WRECK AND
FO CHA CL NO.: SEC CL: 36 F 28/2 H-8 80/3 DES 20 24 C	RT A 30F1 .132/56132/56500; CARG TI ON, BUF 963/56 LT. A SON .23/50.4, LG .3343/5622/217M, E .5CRI PTI ON .FTR; SAN .NO.500; G .CLEARED T .CGS LTR, E .NO.442; G	T CLEARANCE DE USC&GSS PARKE GO, 2255 GT; SU REAY OF SHIPS, USC&GSS PARKE IAR CONTACT AN ON. 80/32/02.4. USC&GS REFERS BUOY MARKS TH N IK IN 1934 30 FT CARGO, 2255 GT TO 38 FT AND RE B/13/44 CARGO, 2255 NT	EPTH IN 28-23- ER, BOWEN AN INK 1934, WE AND SWEPT T R, BOWEN ANI ND LEAST DEPT NO INDICATI S TO CL963/56 IE LOCATION C OVER WK; 22 T; SUNK 1934; EPORTED DEMI	50, 80-3 ID STIRN RECK AT TO A LEA D STIRNI TH BY FA ON OF W B; FLOAT DF THE V 55 TONS POS. AC OLISHED	II, SUPPLEMENTAL LAT. 28/30/50 LON ST DEPTH OF 30 F I, REPORT ON WRE ATHOMETER OF 32. VRECK WAS FOUND TING AIDS REPORT WRECK "MOHICAN"	INSTRUCTION N. 80/32/09 DE T BY THE C&GS ECKS; MOHICAN .5 FT. WAS OB O AT LISTED PO T, RED NUN BUG IN CANAVERAL I MILE; WD SHIPS THRU NG.80-32-09W	S; WRECK 500, MOLISHED BY S S (LTR, 8/13/44) N LIES IN A GEN TAINED AT A PO DSITIONS OF CL OY, LAT. 28/23/ L HARBOR.	MOHICAN, SALVAGE IERAL DEPTH OF DINT IN LAT. 132/56.
DATI VN: 1 INVE OBSI POSI INVE chart depti	ESTIGATION DET ESTIGATION DET ESTIGATION ted wreck th of 33 fee	7/00 (DN:027) TIME: 15:45-17: DN USED: (IE DI, DSITION: LAT. 28 TERMINED BY: D DN SUMMARY: A were found. 5 m	3° 23' 50.39"N FFERENTIAL C 200% bottom neter line spaci	LON. (GPS coveraging single	NAR, ECHO SOUND & . 4c ^{.)} D80° 32' 07.19 "N e side scan sonar in beam echosounde	nvestigation wa er development	over the wreck	ne remains of the resulted in a least

RECRD	10485 VESSLTERMS OBSTRUCTION CARTOCODE 0067	CHART	11484	AREA	<u>Г</u>
LAT83 LATDEC:		90 32 53.2 90.5481111111	NATIVDATUM GPQUALITY GPSOURCE	O Low Direct	
PROJECT		S Assigned	SE	ARCHTYPE	Full
Technique	סב, בס, וע, סער, וע) ote				
	DATE(S): 1/27/00 (DN:027) VN: 027 TIME: 13:46-15:34 INVESTIGATION USED: (IE DI, 200% SIDE SCAN S	SONAR, ECHO SOUND	ER)		
	OBSERVED POSITION: None				
	POSITION DETERMINED BY: DIFFERENTIAL GPS INVESTIGATION SUMMARY: A 200% bottom cover obstruction and nothing was found.	age side scan sonar in	vestigation was o	onducted over	the charted
	CHARTING RECOMMENDATION (HYDROGRAPHER) chart. ここのといい	: The hydrographer	recommends remo	oval of the obs	struction from the
	EVALUATOR COMMENTS: DeleTe	() ObsTN	Rep 1980) PA	
Proprietar					
	YEARSUNK 1980 NIMANUM				Print Record

There were 2 AWOIS items assigned to this survey. The item investigation reports are in the survey separates.

O. COMPARISON WITH THE CHART See Also EVALUATION REPORT.

Comparisons were made with chart 14484, 19th Edition, March 5, 1994. The majority of the areas of the current survey agree well with the chart, with differences of less than 2 feet.

There were no contacts identified during the course of this survey:

Detached position no. 2626 was taken on a yellow buoy with a white light. It is a data collecting-type buoy believed to mark the submerged wave monitor charted in the vicinity. On chart 11478 this buoy is shown as two buoys in the same location. On chart 11484 the buoy is not charted.*

The hydrographer recommends charting the lighted buoy as located by the current survey. De NeT Coneutr

* This bony is charted on the 20th Ed. Oct. 4/97 Chart 11484

There were no dangers to navigation identified on this survey.

The hydrographer recommends that sounding data from this survey be used to update the chart.

P. ADEQUACY OF SURVEY See Also EVALUATION REPORT.

This survey is complete and adequate to supersede all prior surveys within the common area.

Q. AIDS TO NAVIGATION

Aids to navigation were not located during this survey.

There were no bridges, ferry routes, pipelines or overhead power cables within the survey area.

R. STATISTICS

Description	Quantity
Total Number of Positions	2626
Total Lineal Nautical Miles of Hydrography	68.0
Square Nautical Miles of Hydrography	1.0
Days of Production	3
Detached Positions	1
Bottom Samples	0

S. MISCELLANEOUS

No anomalous currents or tides were observed during this survey.

No bottom samples were taken.

T. RECOMMENDATIONS

No additional field work was identified after field office processing was completed. Specific recommendations are made in sections J., N., O., and Q. of this report.

U. REFERRAL TO REPORTS

There are no reports referred to in this report that are not submitted with this report.

Submitted by:

Mark J. McMann Launch Hydrographer-In-Charge

APPROVAL SHEET Field Examination Survey

S-H901-NRT1 F00458 February 2000

This field examination survey was conducted in accordance with the project instructions for S-H901-NRT1, the <u>Hydrographic Manual</u>, the <u>Hydrographic Survey Guidelines</u>, and the <u>Field Procedures Manual</u>. All reports, records, and survey sheets were reviewed by the Launch Hydrographer-in-charge. The team leader did not directly supervise any part of this survey.

This survey is a complete field examination survey for the area described in Section B of this report.

Brian A. Link

Team Leader, Navigation Response Team 1

Mark J McMann

Launch Hydrographer-in-charge

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: February 29, 2000

HYDROGRAPHIC BRANCH: Atlantic

HYDROGRAPHIC PROJECT: S-H901-NRT1-2000

HYDROGRAPHIC SHEET: F00458

LOCALITY:

Approaches to Port Canaveral, FL

TIME PERIOD:

January 27 - February 9, 2000

TIDE STATION USED: 872-1604 Trident Pier, FL

Lat. $28^{\circ} 24.9'N$ Lon. $80^{\circ} 35.6'W$

PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters

HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 1.134 meters

REMARKS: RECOMMENDED ZONING

Use zone(s) identified as: ATL830.

Refer to attachments for zoning information.

Note 1: Provided time series data are tabulated in metric units (meters), relative to MLLW and on Greenwich Mean Time.

CHIEF, REQUIREMENTS AND DEVELOPMENT DIVISION





NOAA FORM 76-155 U.S. DEPARTMENT OF COMMERCE SURVEY NUMBER NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION GEOGRAPHIC NAMES F00458 A OTATO ON LO PON US TOURO COMU. S. MAPS MINGLE P.O. GUIDE OR MAP E ON LOCAL MAPS AL'S ROM CORMATION G REPORTATION OF THE PROPERTY U.S. LIGHT LIST Name on Survey FLORIDA (title) χ χ NORTH ATLANTIC OCEAN 2 χ χ PORT CANAVERAL (title) 3 (Africant) 4 Const Constraint MAR 2 7 2000 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

HYDROGRAPHIC SURVEY STATISTICS REGISTRY NUMBER: F00458

NUMBER OF CONTROL STATIONS		2
NUMBER OF POSITIONS		2626
NUMBER OF SOUNDINGS		2626
	TIME-HOURS	DATE COMPLETED
PREPROCESSING EXAMINATION	4.0	03/15/2000
VERIFICATION OF FIELD DATA	20.0	03/20/2000
QUALITY CONTROL CHECKS	0.0	
EVALUATION AND ANALYSIS	2.0	
FINAL INSPECTION	2.0	03/24/2000
COMPILATION	30.0	04/04/2000
TOTAL TIME	58.0	

03/31/2000

ATLANTIC HYDROGRAPHIC BRANCH APPROVAL

ATLANTIC HYDROGRAPHIC BRANCH EVALUATION REPORT FOR F00458 (2000)

This Evaluation Report has been written to supplement and/or clarify the original Descriptive Report. Sections in this report refer to the corresponding sections of the Descriptive Report.

D. AUTOMATED DATA ACQUISITION AND PROCESSING

The following software was used to process data at the Atlantic Hydrographic Branch:

Hydrographic Processing System NADCON, version 2.10 MicroStation 95, version 5.05 I/RAS B, version 5.01

The smooth sheet was plotted using a Hewlett Packard DesignJet 2500CP plotter.

H. CONTROL STATIONS

Horizontal control used for this survey during data acquisition is based upon the North American Datum of 1983 (NAD 83). Office processing of this survey is based on these values. Three page size plots have been annotated with ticks showing the computed mean shift between NAD 83 and the North American Datum of 1927 (NAD 27).

To place sheet 1 of 3 on NAD 27, move the projection lines 1.012 seconds (31.150 meters or 3.12 mm at the scale of the survey) north in latitude, and 0.822 seconds (22.368 meters or 2.24 mm at the scale of the survey) east in longitude.

To place sheet 2 of 3 on NAD 27, move the projection lines 1.009 seconds (31.065 meters or 3.11 mm at the scale of the survey) north in latitude, and 0.820 seconds (22.318 meters or 2.23 mm at the scale of the survey) east in longitude.

To place sheet 3 of 3 on NAD 27, move the projection lines 1.014 seconds (31.204 meters or 3.12 mm at the scale of the survey) north in latitude, and 0.819 seconds (22.301 meters or 2.23 mm at the scale of the survey) east in longitude.

I. SHORELINE

There is no shoreline within the limits of the present survey.

K. <u>JUNCTIONS</u>

This survey does not junction with any contemporary surveys. Present survey depths are in harmony with the charted hydrography to the north, south, east, and west.

L. COMPARISON WITH PRIOR SURVEYS

A comparison with prior surveys was not done during office processing in accordance with section 4. of the memorandum titled "Changes to Hydrographic Survey Processing", dated May 24, 1995.

The present survey is considered adequate to supersede the prior surveys in the common areas.

N. COMPARISON WITH CHARTS 11478 (18th Edition, Jun 6/98) 11484 (20th Edition, Oct 4/97) Hydrography

The charted hydrography originates with the prior surveys and requires no further consideration. The hydrographer makes adequate chart comparisons in sections N. and O. of the Descriptive Report. The following should be noted:

A charted <u>DISPOSAL AREA</u> (<u>discontinued</u>), in the vicinity of Latitude 28°23'15"N, Longitude 80°34'00"W, was investigated during survey operations. The charted depths are 4 to 5 feet deeper than the present survey depths. It is recommended that the charted <u>DISPOSAL AREA</u> (<u>discontinued</u>) be deleted and appropriate soundings from the present survey be charted.

The present survey is adequate to supersede the charted hydrography within the common area.

O. <u>ADEQUACY OF SURVEY</u>

This is an adequate hydrographic/side scan sonar survey. No additional work is recommended.

R. MISCELLANEOUS

Chart compilation was done by Atlantic Hydrographic Branch personnel, in Norfolk, Virginia. Compilation data will be forwarded to Marine Chart Division, Silver Spring, Maryland. The following NOS charts were used for compilation of the present survey:

11478 (18th Ed., Jun, 6/98) 11484 (20th Ed., Oct, 4/97) Robert Snow

Cartographic Technician Verification of Field Data Evaluation and Analysis

APPROVAL SHEET F00458

Initial Approvals:

The completed survey has been inspected with regard to survey coverage, delineation of depth curves, development of critical depths, cartographic symbolization, and verification or disproval of charted data. The digital data have been completed and all revisions and additions made to the smooth sheet during survey processing have been entered in the digital data for this survey. The survey records and digital data comply with NOS requirements except where noted in the Evaluation Report.

<	Colour 15 Col Date: 3/31/64
	Robert G. Roberson Cartographer
	Atlantic Hydrographic Branch
	I have reviewed the smooth sheet, accompanying data, and

f reports. This survey and accompanying digital data meet or exceed NOS requirements and standards for products in support of nautical charting except where noted in the Evaluation Report.

Inhau L 1 par Date: 3/31/00

Lieutenant Commander, NOAA Chief, Atlantic Hydrographic Branch

Final Approval:

Approved: Samuel P. SUBOW Date: 4-6-00

Samuel P. DeBow, Jr.

Captain, NOAA

Chief, Hydrographic Surveys Division

NORTH ATLANTIC OCEAN

28° 24'00"

37 37 38 38 37 38 37 36 38 37 37 36 37 37 37 37 37 37 38 37 37 38 38 38 38 37 37 36 37 38 37 37 38 37 38 37 38 37 38 38 38 37 38 37 37 39 38 38 38 37 37 37 39 37 38 39 39 38 38 39 37 38 39 39 38 38 38 39 39 38 37 38 38 38 38 38 38 38 38 3939 38 38 38 38 38 38 39 38 38 38 38 38 38

80° B2′ 30″W

NAD 27 - 28°23'30"N

28° 23' 30"

CHECKED BY: RS 3/16/00

F00458 **FLORIDA** NORTH ATLANTIC OCEAN

APPROACHES TO PORT CANAVERAL

JAN. - FEB. 2000 SCALE: 1:10,000

SOUNDINGS IN FEET AT MLLW

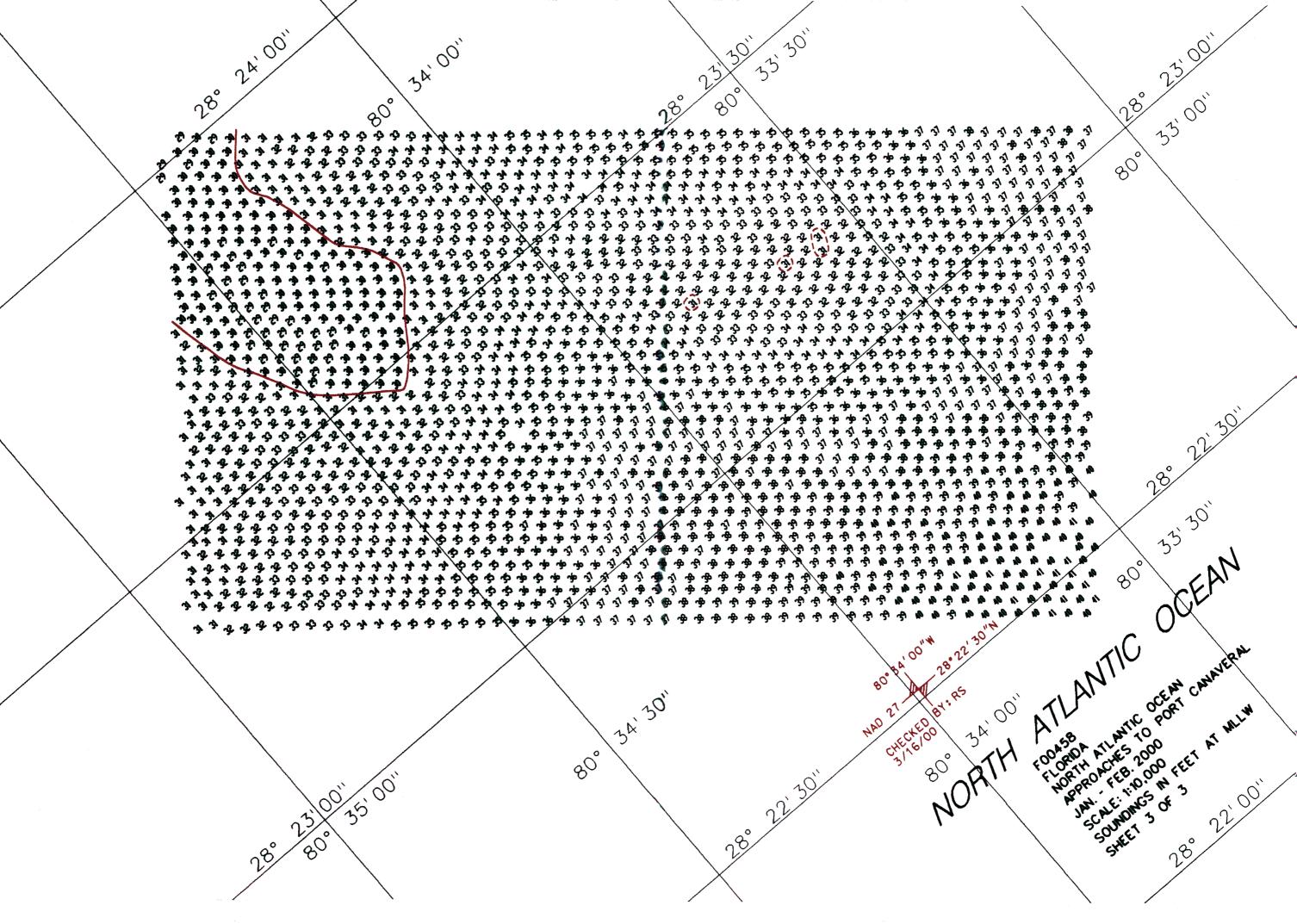
SHEET 1 OF 3 AWOIS ITEM *235

80°

32' 30"

80° 32' 00"

80°	34' 30" 80°	34' 00''	33' 30'' 80°	33' 00'' 80°	32' 30''
					28° 25' 30''
		NORTH ATLAN	ITIC OCEAN		
		34'00"W 28°25'00"N	32 31 31 32 31 32 32 32	26 25 26 26 25 25 25 25 21 35 25 32 31 31 35 35 35 31 31 31 31 33 31 32 32 31	28° 25' 00''
	CHECKED 3/16/00	BY: RS	33 33 33 33 33 33 33 33 33 33 33 33 33	33 32 33 33 33 32 32 32 32 32 32 32 32 3	28° 24' 30''
	34' 30'' 80°	34' 00'' 80°	33' 30'' 80°	33' 00''	32' 30"



MARINE CHART BRANCH

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. ...

F	50	45	8
-			

INSTRUCTIONS

A basic hydrographic or topographic survey supersedes	s all information of like nature on the uncorrected cha	art.
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1. Letter all information.

In "Remarks" column cross out words that do not apply.
 Give reacons for deviations if any from recommendations made under "Comparison with Charts" in the Review.

CHART	DATE	CARTOGRAPHER	REMARKS
11478	4/3/00	yn-	Full-Part Before After Marine Center Approval Signed Via Full APPLICATION
	77	MORRIS WIKE	Drawing No. OF SOUNDINGS AND CURRS. From
			SMOOTH SHEET
1484	4/4/00	412	Full Part Before After Marine Center Approval Signed Via Full APPLICATION
		NORRIS WILL	
			SHEET THRU 11478
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
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